IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Applicant:	Chen, et. al.
Serial No.:	10/631,947
Filed:	July 30, 2003
Art Unit:	2616
Examiner:	O'Connor, Brian T.
Title:	METHOD AND SYSTEM FOR CONFIGURING GATEWAYS TO FACILITATE A MODEM CONNECTION OVER A PACKET NETWORK

DECLARATION UNDER 37 C.F.R. § 1.132

Assistant Commissioner for Patents
Washington, D.C. 20231-0001

Dear Assistant Commissioner:
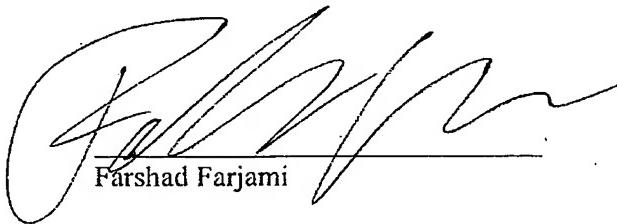
I, Farshad Farjami, declare as follows:

1.   I am a partner at Farjami & Farjami LLP, an intellectual property law firm, located at 26522 La Alameda Ave., Suite 360, Mission Viejo, California 92691.

2.   I declare that copies of all documents attached to this declaration, as Appendices A, B and C, are true and accurate copies of such documents.

3.   I hereby declare that all statements made herein of my own knowledge are true and that all statements made on information and belief are believed to be true; and further that these statements were made with the knowledge that willful false statements and the like so made are punishable by fine of imprisonment, or both, under Section 1001 of Title 18 of the United States Code, and that such willful false statements may jeopardize the validity of the above-referenced patent application or any patent issuing thereon.

10/24/08
_____
Date

_____
Farshad Farjami

APPENDIX A

[AVT] Re: Non-standard RFC 2833 definition of ANS, /ANS, ANSam and /ANSam

- *To*: Rajesh Kumar <rkumar@cisco.com>
- *Subject*: [AVT] Re: Non-standard RFC 2833 definition of ANS, /ANS, ANSam and /ANSam
- *From*: Henning Schulzrinne <hgs@cs.columbia.edu>
- *Date*: Sat, 26 Oct 2002 05:02:07 -0400
- *Cc*: avt@ietf.org, bfoster@cisco.com, hisham@cisco.com, flemming Andreasen <fandreas@cisco.com>
- *List-help*: <mailto:avt-request@ietf.org?subject=help>
- *List-id*: Audio/Video Transport Working Group <avt.ietf.org>
- *List-post*: <mailto:avt@ietf.org>
- *List-subscribe*: <https://www1.ietf.org/mailman/listinfo/avt>,<mailto:avt-request@ietf.org?subject=subscribe>
- *List-unsubscribe*: <https://www1.ietf.org/mailman/listinfo/avt>,<mailto:avt-request@ietf.org?subject=unsubscribe>
- *Organization*: Columbia University
- *References*: <4.3.2.7.2.20021024154549.01dcb648@mira-sjc5-8.cisco.com>
- *Sender*: avt-admin@ietf.org
- *User-agent*: Mozilla/5.0 (Windows; U; Windows NT 5.0; en-US; rv:1.1) Gecko/20020826

I've been relying on the expertise of others in describing these. I would thus value a more concise and V.25-compliant definition of these events. Can you provide text?

Rajesh Kumar wrote:

> Henning,
> There are certain issues with the definition of the ANS, /ANS, ANSam and /ANSam events that need clarification.
>
> Since at least 450 ms is needed to detect a phase reversal, it is not possible to discriminate between ANS and /ANS before 450 ms. However, this results in an unacceptable delay in informing the far end that a 2100 Hz signal (whatever its variant) has been detected. It takes less than 200 ms to detect that fact that this is a 2100 Hz signal.
>
> Question 1: Does RFC 2833 consider it acceptable to send an ANS event (200 ms) and then an /ANS event (450 ms), thereby using the /ANS event as an "update" of the ANS event? The same consideration would apply to ANSam and /ANSam. This would change how you have defined these events in RFC 2833.
>
> Queston 2: Your use of the "bar" or "slash" is at odds with that of the ITU V.25. In the ITU specification, /ANS is not a separate signal but refers to the 2100 Hz cycle during which phase is reversed. Thus, the RFC 2833 definition of /ANS corresponds to the following ITU V.25 sequence, where each element in the sequence is one cycle:
> ANS, /ANS, ANS, /ANS, ANS, /ANS, ANS
>
> However, I have no problem with your re-definition of that the "bar" or "slash" means. I only want to point out that you say in RFC 2833 that your definition is equivalent to the ITU's, when it isn't. Please look at Figure 3 of ITU V.25 and add the applicable clarification in your document.
>
> Thanks,

Rajesh

Audio/Video Transport Working Group
avt@ietf.org
https://www1.ietf.org/mailman/listinfo/avt

- **Follow-Ups:**
    - o [AVT] Suggested changes to RFC 2833 re: fax/modem tones
        - *From:* Rajesh Kumar
    - o Re: [AVT] Re: Non-standard RFC 2833 definition of ANS, /ANS, ANSam and /ANSam
        - *From:* Rajesh Kumar

- **References:**
    - o [AVT] Non-standard RFC 2833 definition of ANS, /ANS, ANSam and /ANSam
        - *From:* Rajesh Kumar

- Prev by Date: Re: [AVT] 2833bis - hook events
- Next by Date: [AVT] MWPP implementation
- Previous by thread: [AVT] Non-standard RFC 2833 definition of ANS, /ANS, ANSam and /ANSam
- Next by thread: Re: [AVT] Re: Non-standard RFC 2833 definition of ANS, /ANS, ANSam and /ANSam
- Index(es):
    - o **Date**
    - o **Thread**

http://www.ietf.org/mail-archive/web/avt/current/msg01686.html   10/24/2008

PAGE 19/27 * RCVD AT 10/27/2008 3:52:48 PM [Eastern Daylight Time] * SVR:USPTO-EFXRF-5/14 * DNIS:2738300 * CSID:949 282 1002 * DURATION (mm-ss):05-18

APPENDIX B

[AVT] Suggested changes to RFC 2833 re: fax/modem tones

- *To*: Henning Schulzrinne <hgs@cs.columbia.edu>
- *Subject*: [AVT] Suggested changes to RFC 2833 re: fax/modem tones
- *From*: Rajesh Kumar <rkumar@cisco.com>
- *Date*: Wed, 30 Oct 2002 14:08:30 -0800
- *Cc*: avt@ietf.org
- *In-reply-to*: <3DBA5A0F.7000305@cs.columbia.edu>
- *List-help*: <mailto:avt-request@ietf.org?subject=help>
- *List-id*: Audio/Video Transport Working Group <avt.ietf.org>
- *List-post*: <mailto:avt@ietf.org>
- *List-subscribe*: <https://www1.ietf.org/mailman/listinfo/avt>,<mailto:avt-request@ietf.org?subject=subscribe>
- *List-unsubscribe*: <https://www1.ietf.org/mailman/listinfo/avt>,<mailto:avt-request@ietf.org?subject=unsubscribe>
- *References*: <4.3.2.7.2.20021024154549.01dcb648@mira-sjc5-8.cisco.com>
- *Sender*: avt-admin@ietf.org

Henning,
I have sent you an email a few minutes back with an RFC2833bis enclosure, and the suggested changes marked. In the present email, I am listing points from that enclosure for review by the AVT group. The requested changes are:

Change #1: I have changed the definition of the volume field in Section 3.5. You has rightly added Volume? columns to the event tables. However, the text in Section 3.5 was wrong in that it said volume was pertinent to DTMF only. Volume is important for modem and fax events, and some other categories of events. The new text is as follows:

volume: For DTMF digits and other events representable as tones,
        this field describes the power level of the tone, expressed
        in dBm0 after dropping the sign. Power levels range from 0
        to -63 dBm0. The range of valid DTMF is from 0 to -36 dBm0
        (must accept); lower than -55 dBm0 must be rejected (TR-
        TSY-000181, ITU-T Q.24A). Thus, larger values denote lower
        volume. If this field is not defined for an event,

    it is set to zero by the sender and is

    ignored by the receiver. If a zero volume is indicated for
        an event for which the volume field is defined, then the receiver

    may reconstruct the volume from interpolation. This allows
    backwards compatibility with RFC 2833, where the volume field
    was specified as undefined for non-DTMF events.

Change #2: I have re-done the definitions of ANS, /ANS, ANSam and /ANSam to indicate that these definitions follow semantics that are different from V.25 semantics, and for a good reason. I have also added precautions that must be followed when detecting and reporting these events. The new definitions are as follows:

http://www.ietf.org/mail-archive/web/avt/current/msg01709.html   10/24/2008

PAGE 21/27 * RCVD AT 10/27/2008 3:52:48 PM [Eastern Daylight Time] * SVR:USPTO-EFXRF-5/14 * DNIS:2738300 * CSID:949 282 1002 * DURATION (mm-ss):05-18

ANS: <<<---definition unchanged------------>>>

/ANS: This is the same signal as ANS, except that it reverses
    phase at an interval of 450 +/- 25 ms. It disables both
    echo cancellers and echo suppressors. (In the ITU
    Recommendation V.25 [8], an ANS with a bar on top refers
    to individual phase-reversed cycles rather than to the
    entire signal.)

ANSam: <<<---definition unchanged------------>>>

/ANSam: <<<---definition unchanged------------>>>

These definitions of the ANS, /ANS, ANSam and /ANSam tones refer to the entire signal. Unlike ITU
Recommendation V.25 [8], they do not refer to individual 450 ms cycles.

An ANS or ANSam event packet should not be sent until it is possible to discriminate between an ANS and ANSam
event. It is however, permissible to send an ANS or ANSam event packet before phase reversals can be detected. Phase
reversals, if any, occur at intervals of 450 +/- 25 ms. If a phase reversal is detected after an ANS or ANSam event
packet is sent, it must be followed by the transmission of an /ANS or /ANSam event packet.

**Change #3: I have added a new ANS event, ANS2225. I have done so per an action item from ITU SG16 to
request you for this event. This event is used in equipment for the disabled and it must not be confused with the
other ANS events. Of course, a new number needs to be allocated to this event. I have not done that. The new
event is defined as follows:**

ANS2225: This 2225 Hz answer tone is described in ITU Recommendation

V.18, Annex D for one of several classes of modems operating in   the text telephone mode. It is also referred
to in ITU Recommendation V.22. This is a pure tone with no amplitude   modulation and no   semantics
attached to phase reversals, if   there are any.
                        Event number   Volume????

ANS2225   ??   yes

Explanatory note to Henning: Initially a proprietary "Bell System" method, the 2225 Hz answer tone is now included
in ITU V.18, Annex D which addresses TDD (telecommunications for the disabled) equipment. It is necessary to
accommodate it for completeness, and for compliance with various legal ordinances. A distinct number must be
allocated to this event since it must be differentiated from the normal, 2100 Hz ANS when reproduced at the far-end
gateway.

The following folks have helped me create the suggested changed text: Alex Urquizo, Dan Deliberato, Herb Wildfeur
and Mehryar Garakani, Bill Foster, Flemming Andreasen and Hisham Abdelhamid.

Please comment on these recommended changes.

Thanks,

Rajesh

At 05:02 AM 10/26/2002 -0400, Henning Schulzrinne wrote:

    I've been relying on the expertise of others in describing these. I would thus value a more concise and
    V.25-compliant definition of these events. Can you provide text?

Rajesh Kumar wrote:

Henning,

There are certain issues with the definition of the ANS, /ANS, ANSam and /ANSam events that need clarification.

Since at least 450 ms is needed to detect a phase reversal, it is not possible to discriminate between ANS and /ANS before 450 ms. However, this results in an unacceptable delay in informing the far end that a 2100 Hz signal (whatever its variant) has been detected. It takes less than 200 ms to detect that fact that this is a 2100 Hz signal.

Question 1: Does RFC 2833 consider it acceptable to send an ANS event (200 ms) and then an /ANS event (450 ms), thereby using the /ANS event as an "update" of the ANS event? The same consideration would apply to ANSam and /ANSam. This would change how you have defined these events in RFC 2833.

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ANS, /ANS, ANS, /ANS, ANS, /ANS, ANS .

However, I have no problem with your re-definition of that the "bar" or "slash" means. I only want to point out that you say in RFC 2833 that your definition is equivalent to the ITU's, when it isn't. Please look at Figure 3 of ITU V.25 and add the applicable clarification in your document.

Thanks,
Rajesh

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avt@ietf.org
https://www1.ietf.org/mailman/listinfo/avt

- **Follow-Ups:**
  - o Re: [AVT] Suggested changes to RFC 2833 re: fax/modem tones
    - *From:* Henning Schulzrinne
  - o Re: [AVT] Suggested changes to RFC 2833 re: fax/modem tones
    - *From:* Henning Schulzrinne

- **References:**
  - o [AVT] Non-standard RFC 2833 definition of ANS, /ANS, ANSam and /ANSam
    - *From:* Rajesh Kumar
  - o [AVT] Re: Non-standard RFC 2833 definition of ANS, /ANS, ANSam and /ANSam
    - *From:* Henning Schulzrinne

- Prev by Date: RE: [AVT] Re: Non-standard RFC 2833 definition of ANS, /ANS, ANSa m and /ANSam
- Next by Date: [AVT] I-D ACTION:draft-ietf-avt-ulp-06.txt
- Previous by thread: Re: [AVT] Re: Non-standard RFC 2833 definition of ANS, /ANS, ANSam and /ANSam
- Next by thread: Re: [AVT] Suggested changes to RFC 2833 re: fax/modem tones
- Index(es):
  - o Date
  - o Thread

APPENDIX C

[Date Prev][Date Next][Thread Prev][Thread Next][Date Index][Thread Index]

Re: [AVT] Suggested changes to RFC 2833 re: fax/modem tones

- *To*: Rajesh Kumar <rkumar@cisco.com>
- *Subject*: Re: [AVT] Suggested changes to RFC 2833 re: fax/modem tones
- *From*: Henning Schulzrinne <hgs@cs.columbia.edu>
- *Date*: Mon, 04 Nov 2002 13:51:32 -0500
- *Cc*: avt@ietf.org
- *In-reply-to*: <4.3.2.7.2.20021024154549.01dcb648@mira-sjc5-8.cisco.com>
- *List-help*: <mailto:avt-request@ietf.org?subject=help>
- *List-id*: Audio/Video Transport Working Group <avt.ietf.org>
- *List-post*: <mailto:avt@ietf.org>
- *List-subscribe*: <https://www1.ietf.org/mailman/listinfo/avt>,<mailto:avt-request@ietf.org?subject=subscribe>
- *List-unsubscribe*: <https://www1.ietf.org/mailman/listinfo/avt>,<mailto:avt-request@ietf.org?subject=unsubscribe>
- *References*: <4.3.2.7.2.20021024154549.01dcb648@mira-sjc5-8.cisco.com> <4.3.2.7.2.20021030135422.01fed858@mira-sjc5-8.cisco.com>
- *Sender*: avt-admin@ietf.org
- *User-agent*: Mozilla/5.0 (Windows; U; Windows NT 5.1; en-US; rv:1.2b) Gecko/20021016

I've incorporated your text on ANS and related tones, with minor tweaks. Since I missed the -0x cut-off, a revised version of the I-D won't appear until after IETF55, but

http://www.cs.columbia.edu/~hgs/rtp/drafts/draft-ietf-avt-rfc2833bis-02.txt
http://www.cs.columbia.edu/~hgs/rtp/drafts/draft-ietf-avt-rfc2833bis-02.pdf

has a preview.

```
These definitions of the ANS, /ANS, ANSam and /ANSam tones refer to the
entire signal. Unlike ITU Recommendation V.25 [8], they do not refer to
individual 450 ms cycles.

An ANS or ANSam event packet should not be sent until it is possible to
discriminate between an ANS and ANSam event. It is however, permissible
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detected. Phase reversals, if any, occur at intervals of 450 +/- 25 ms.
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other ANS events. Of course, a new number needs to be allocated to this
event. I have not done that. The new event is defined as follows:

*         ANS2225: This  2225 Hz answer tone is described in ITU
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      V.18, Annex D for one of several classes of  modems operating in
            the text telephone mode. It is also referred to in ITU
         Recommendation  V.22. This is a pure tone with no amplitude
```

http://www.ietf.org/mail-archive/web/avt/current/msg01721.html   10/24/2008

PAGE 26/27 * RCVD AT 10/27/2008 3:52:48 PM [Eastern Daylight Time] * SVR:USPTO-EFXRF-5/14 * DNIS:2738300 * CSID:949 282 1002 * DURATION (mm-ss):05-18

```
         modulation and no        semantics attached to phase reversals,
if          there are any.
                                   Event number      Volume????

         ANS2225                   ??             yes
```

Explanatory note to Henning: Initially a proprietary "Bell System"
method, the 2225 Hz answer tone is now included in ITU V.18, Annex D
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Please comment on these recommended changes.

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Rajesh

Audio/Video Transport Working Group
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https://www1.ietf.org/mailman/listinfo/avt

- **Follow-Ups:**
    - SV: [AVT] Suggested changes to RFC 2833 re: fax/modem tones
        - *From:* Gunnar Hellstrom

- **References:**
    - [AVT] Non-standard RFC 2833 definition of ANS, /ANS, ANSam and /ANSam
        - *From:* Rajesh Kumar
    - [AVT] Suggested changes to RFC 2833 re: fax/modem tones
        - *From:* Rajesh Kumar

- Prev by Date: Re: [AVT] Suggested changes to RFC 2833 re: fax/modem tones
- Next by Date: Re: [AVT] Draft agenda for Atlanta
- Previous by thread: Re: [AVT] Suggested changes to RFC 2833 re: fax/modem tones
- Next by thread: SV: [AVT] Suggested changes to RFC 2833 re: fax/modem tones
- Index(es):
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http://www.ietf.org/mail-archive/web/avt/current/msg01721.html   10/24/2008

PAGE 27/27 * RCVD AT 10/27/2008 3:52:48 PM [Eastern Daylight Time] * SVR:USPTO-EFXRF-5/14 * DNIS:2738300 * CSID:949 282 1002 * DURATION (mm-ss):05-18